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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BENJAMIN J. FELDMAN,
LAM N. TRAN, ZENGHE LIU, and
YI WANG

Appeal 2016-004816
Application 13/767,350
Technology Center 1700

Before ADRIENE LEPIANE HANLON, CATHERINE Q. TIMM, and JAMES C. HOUSEL, *Administrative Patent Judges*.

PER CURIAM.

DECISION ON APPEAL[1]

STATEMENT OF THE CASE

Appellants[2] filed an appeal under 35 U.S.C. § 134(a) from the Examiner's decision finally rejecting claims 1–11 and 13–19. We have jurisdiction under 35 U.S.C. § 6(b).

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[1] Our decision refers to Appellants' Specification filed Feb. 14, 2013 (Spec.), the Final Office Action mailed Apr. 9, 2015 (Final Act.), Appellants' Appeal Brief filed Oct. 6, 2015 (Br.), and the Examiner's Answer mailed Jan. 15, 2016 (Ans.).

[2] Appellants identify the real party in interest as Abbott Diabetes Care Inc. Br. 3.

We AFFIRM.

The claims on appeal are directed to methods of manufacturing an analyte sensor (*see, e.g.*, claim 1) and an analyte sensor for analyzing an analyte (*see, e.g.*, claim 10). The sensor includes a first electrode including carbon, gold or palladium and a second electrode including platinized carbon (*see, e.g.*, claims 1 and 10).

Independent claim 1 is illustrative. We reproduce claim 1 from the Claims Appendix of the Appeal Brief with the limitations at issue italicized and indenting added:

> 1. A method of manufacturing an analyte sensor, the method comprising:
>
> providing a first substrate and a second substrate, the first substrate comprising a first major surface and a second major surface, the second substrate comprising a first major surface and a second major surface;
>
> *disposing carbon, gold or palladium on the second major surface of the first substrate or the first major surface of the second substrate to form a first electrode*;
>
> *disposing platinized carbon on the second major surface of the first substrate or the first major surface of the second substrate to form a second electrode in absence of disposing a silver/silver chloride layer on the first or the second substrate*;
>
> combining the first and second substrates to provide an analyte sensor,
>
> wherein the platinum is a catalyst for reducing atmospheric oxygen, and wherein the sensor does not include Ag/AgCl,
>
> wherein the catalyst mediates transfer of electrons generated from oxidation of the analyte to atmospheric oxygen.

Br. Claims Appendix 13 (emphasis and indenting added).

The claims on appeal stand rejected as follows:

(1) claims 1, 3–5, 10, 11, 13, and 14 under 35 U.S.C. § 103(a) as

being unpatentable over Davies;[3]

(2) claims 2 and 19 under 35 U.S.C. § 103(a) as unpatentable over Davies in view of Wilsey;[4]

(3) claims 6, 8, 9, 15, 17, and 18 under 35 U.S.C. § 103(a) as being unpatentable over Davies in view of Feldman;[5] and

(4) claims 7 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Davies in view of Zhang.[6]

OPINION

The dispositive issue on appeal is whether Appellants have identified a reversible error in the Examiner's finding that Davies would have suggested to those of ordinary skill in the art forming a first electrode of gold or carbon and forming a second electrode of platinized carbon with the reasonable expectation of obtaining an electrochemical sensor with electrodes with predictable conductive properties.

Appellants have not persuaded us of such an error.

Appellants contend claim 1 requires a specific combination of electrode materials that Davies does not teach or suggest because Davies "simply discloses that electrodes in an analyte sensor 'may be formed of any conductive material which can be deposited in patterns in a continuous printing process.'" Br. 7 (quoting Davies ¶ 37). Appellants assert this "is not [a] teaching or suggestion of a specific composition of electrodes where

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[3] Davies et al., US 2004/0026243 A1, published Feb. 12, 2004 ("Davies").
[4] Wilsey, US 7,276,147 B2, issued Oct. 2, 2007 ("Wilsey").
[5] Feldman et al., US 2006/0169599 A1, published Aug. 3, 2006 ("Feldman").
[6] Zhang et al., US 2010/0326843 A1, published Dec. 30, 2010 ("Zhang").

a first electrode consists of carbon, gold or palladium and a second electrode includes platinized carbon" because it would have required "one of ordinary skill in the art to pick and choose the specifically claimed electrode composition from a large number of possibilities." Br. 7.

Appellants' arguments are not persuasive. Davies discloses the following for materials of its electrodes:

> The electrodes may be formed of any conductive material which can be deposited in patterns in a continuous printing process. This would include *carbon electrodes and electrodes formed from platinized carbon, gold*, silver, and mixtures of silver and silver chloride.

Davies ¶ 37 (emphasis added).

Therefore, Davies discloses the key feature in selection of the electrode material is the selection of a conductive material that can be deposited in patterns in a continuous printing process and specifically lists carbon electrodes and electrodes formed from materials such as platinized carbon and gold as examples. As a result, Davies discloses carbon, platinized carbon, and gold as materials that can be successfully used for electrodes in an analyte sensor. *In re Droge*, 695 F.3d 1334, 1338 (Fed. Cir. 2012) ("Obviousness does not require absolute predictability of success . . . all that is required is a reasonable expectation of success.") (citing *In re Kubin*, 561 F.3d 1351, 1360 (Fed. Cir. 2009)); *In re O'Farrell*, 853 F.2d 894, 903–04 (Fed. Cir. 1988) (citations omitted) ("For obviousness under § 103, all that is required is a reasonable expectation of success.").

In a determination of obviousness, a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. *Merck & Co v. Biocraft Labs.*, 874 F.2d 804, 807 (Fed. Cir. 1989)

("That the [prior art] patent discloses a multitude of effective combinations does not render any particular formulation less obvious."). Although Davies does not disclose a specific analyte sensor embodiment in which a first electrode is made out of carbon or gold and a second electrode is made out of platinized carbon, the disclosure of Davies would have reasonably suggested to one of ordinary skill in the art that any of the combinations of conductive materials that can be deposited in patterns in a continuous printing process would result in useful electrodes, including combinations of the particular electrode materials exemplified by Davies and recited in claim 1. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). Under the facts of this case, the burden shifts to Appellants to show they achieve unexpected results for their combinations of electrode materials. Appellants have not provided any secondary indicia, such as unexpected results, to demonstrate the nonobviousness of the electrode material combinations recited in claim 1.

Independent claim 10 recites an analyte sensor comprising, among other things, "a first electrode consisting of carbon, gold or palladium" and "a second electrode consisting essentially of platinized carbon." Br. Claims Appendix 14. The Examiner makes findings and a conclusion of obviousness for claim 10 similar to those for claim 1. Ans. 3–5. Appellants do not argue claim 10 separately from claim 1. Br. 6–10. Therefore, we sustain the § 103 rejection of claim 10 over Davies for the same reasons. Appellants do not argue claims 3–5, 11, 13, and 14 separately. Br. 6–10.

For these reasons and those set forth in the Examiner's Answer, we sustain the Examiner's § 103 rejection of claims 1, 3–5, 10, 11, 13, and 14 over Davies.

For claims 2, 6–9, and 15–19, Appellants merely reiterate the arguments set forth in support of the patentability of claim 1 and contend Wilsey, Feldman, and Zhang do not remedy the deficiencies of Davies in the rejection of claim 1. Br. 10–11. For the reasons set forth above, there are no deficiencies in the rejection of claim 1 that require curing by Wilsey, Feldman, or Zhang.

DECISION

On the record before us, we affirm the decision of the Examiner to reject the claims.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED